CIN-100US1

Appln. No.: 10/718,395

Amendment Dated November 2, 2004 Reply to Office Action of July 13, 2004

<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 19 and 20 without prejudice to the applicants right to file one or more divisional applications thereon.

## Listing of Claims:

- 1. (Cancelled)
- 2. (Cancelled)
- 3. (Cancelled)
- 4. (Cancelled)
- 5. (Cancelled)
- 6. (Cancelled)
- 7. (Cancelled)
- 8. (Cancelled)
- 9. (Cancelled)
- 10. (Cancelled)
- 11. (Cancelled)
- 12. (Cancelled)
- 13. (Cancelled)
- 14. (Cancelled)
- 15. (Cancelled)
- 16. (Cancelled)
- 17. (Cancelled)
- 18. (Currently Amended) A method for improving the efficiency of a wood pulping process using a displacement batch digester wherein said displacement batch digester uses untreated pulp washing fluid to displace hot black liquor from said digester to an accumulator, comprising the step of passing said untreated pulp washing fluid through filtration media to remove all or a portion of high molecular weight organic by-products from said washing fluid to increase concentration gradients for mass transfer prior to said washing fluid being used to displace said hot black liquor .
  - 19. (Cancelled)

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## 20. (Cancelled)

21. (Currently Amended) A method for improving the efficiency of a wood pulping process incorporating dilution of pulp comprising the step of:

withdrawing filtrate containing high molecular weight organic by-products from any washing step;

passing said filtrate through a filter media to remove high molecular weight organic by-products to yield a treated filtrate with a lower concentration of colloidal and/or high molecular weight organic by-products to increase concentration gradients for mass transfer; and

using said treated filtrate in any dilution zone, pipe or equipment in said pulping process to dilute said pulp.

- 22. (Currently Amended) A method for improving the efficiency of a wood pulping process including fiber washing in a multi-stage washing process comprising the steps of: separating washing liquid from said washed fibers in one of a last stage or any stage except said first stage of said multi-stage washing process, passing said washing liquid through a filtration media to remove high molecular weight organic by-products from said washing liquid to produce a washing liquid having a reduced quantity of high molecular weight organic by-products and increased concentration gradients for mass transfer, and using said washing liquid having a reduced quantity of high molecular weight organic by-products in a stage of said multi-stage washing process preceding the stage from which said washing liquid was withdrawn.
- 23. (Currently Amended) A method for improving the efficiency of a wood pulping process that includes oxygen as a delignification stage proceeded by and followed by washing of pulp comprising the steps of:

separating washing fluid from said pulp after one of any of the washing steps proceeding, or any of the washing steps following said oxygen delignification step, passing said separated washing fluid from said pulp through a filtration media to remove high molecular weight organic by-products from said washing fluid to produce a cleaned washing fluid with increased concentration gradients for mass transfer, and using said cleaned washing fluid in any one of any washing operation or to dilute said pulp prior to, after, or during oxygen delignification.

- 24. (New) A method according to claim 18 including the step of using membrane separates to remove said high molecular-weight organic by-products from said liquor.
- 25. (New) A method according to claim 21 including the step of using membrane separation to remove said high molecular-weight organic by-products from said filtrate.
- 26. (New) A method according to claim 22 including the step of using membrane separation to remove said high molecular-weight organic by-products from said washing liquid.
- 27. (New) A method according to claim 23 including the step of using membrane separation to remove high molecular-weight by-products from said washing fluid.